REMARKS

By this Amendment, claims 1, 3-8, 10-11, 14-15 and 17-18 are amended. Claims 2, 9, 12-13, 16 and 19-20 remain in the application. Thus, claims 1-20 are active in the application. Reexamination and reconsideration of the application are respectfully requested.

The specification and abstract have been carefully reviewed and revised in order to correct grammatical and idiomatic errors in order to aid the Examiner in further consideration of the application. The amendments to the specification and abstract are incorporated in the attached substitute specification and abstract. No new matter has been added.

Also attached hereto is a marked-up version of the substitute specification and abstract illustrating the changes made to the original specification and abstract.

In item 12 on the Office Action Summary form and in item 1 on page of the Office Action, the Examiner kindly acknowledged the Applicants' claim of foreign priority based on EP 00119566.8, but noted that a certified copy of the foreign priority document has not yet been submitted. Accordingly, a certified copy of the foreign priority document is submitted concurrently herewith under a separate cover letter. The Applicants respectfully request the Examiner to acknowledge the receipt of the certified copy of the foreign priority document.

In item 2 on page 2 of the Office Action, claim 11 was objected for the identified informalities. Claim 11 has been amended to include the amendments that were kindly suggested by the Examiner. Accordingly, in view of the amendments to claim 11, the Applicants respectfully request the Examiner to withdraw the objection to claim 11.

The present invention provides a method and apparatus for transmitting data packets in a data stream, where the data packets have compressed headers. The method and the apparatus of the present invention each compress a header using a context, transmit at least one update packet which contains data indicating the content and which is used to update the context, and transmit at least one non-update packet which does not update the context.

As described beginning at line 24 on page 6 of the original specification (beginning at line 15 on page 8 of the substitute specification), a compressor 100 first

detects whether or not an irregular change of the packet stream has occurred. If no irregular change of the packet stream has occurred, the present invention provides that there is no need to transmit extended packets. However, if it is detected that an irregular change of the packet stream has occurred, at least one packet stream parameter is determined, and, depending on the determined packet stream parameter, either an extended update packet containing information about the irregular change of the packet stream or an extended non-update packet containing information about the irregular change of the packet stream is transmitted. The present invention provides that the extended non-update packet is not used to update the context.

Claim 1 recites the method of the present invention, and claim 11 recites the apparatus of the present invention.

Claim 1 recites the method as comprising, in part, transmitting at least one update packet which updates the context, and transmitting at least one non-update packet which does not update the context. Claim 1 also recites the method as comprising detecting whether there is an irregular change of the packet stream, and determining at least one packet stream parameter. Furthermore, claim 1 recites the method as comprising transmitting, depending on the determined packet stream parameter, either an extended update packet containing information about the irregular change or an extended non-update packet containing information about the irregular change. Claim 1 further recites that the extended non-update packet is not used to update the context.

Claim 11 recites the apparatus as comprising, in part, a transmission unit for transmitting at least one update packet containing data indicating the context, where the transmission unit is adapted to transmit at least one non-update packet. The apparatus of claim 11 as comprises a detection unit for detecting an irregular change of the packet stream, and a control unit for determining at least one packet stream parameter. Furthermore, claim 11 defines the transmission unit as being operable to, depending on the determined at least one packet stream parameter, transmit either an extended update packet containing information about the irregular change or an extended non-update packet containing information about the irregular change. Claim 11 further recites that the extended non-update packet is not used to update the context.

Accordingly, claims 1 and 11 each recite a two-step process for determining whether to transmit an extended update packet or an extended non-update packet if an irregular change of the packet stream is detected. First, at least one packet stream parameter is determined. Then, depending on the obtained packet stream parameter, it is decided whether to transmit an extended update packet containing information about the irregular change or an extended non-update packet containing information about the irregular change, where the extended non-update packet is not used to update the packet.

Chuah discloses an apparatus and method for compressing a GTP/UDP/IP header (GTP header) and/or an RTP/UDP/IP header (RTP header) of a data packet in a mobile transmission system such as UMTS (Universal Mobile Telecommunications System) between two peers, e.g., mobile station (MS) 205 and IP End Host 240 (see Column 1, lines 51-60, Column 2, lines 25-26, Column 2, line 66 to Column 3, line 7, and Figure 1).

Chuah discloses that when establishing a context for a GTP header compression or an RTP header compression, at least one packet with a full GTP header or an RTP header is sent between an initiating peer (e.g., MS 205) to another peer (e.g., IP End Host 240), whereupon the header compression is negotiated between the peers, and the initiating peer in turn formats data packets in accordance with the GTP or RTP and then compresses the header before transmitting the packets. That is, to establish a context for GTP header compression or RTP header compression, the initiating peer sends at least one packet with a full (non-compressed) header to the other peer, and after the two peers exchange signaling messages (e.g., an RTP context set up message) to set up the GTP or RTP compression context, the initiating peer then sends packets with compressed headers to the other peer (see Column 4, line 60 to Column 5, line 24 and Column 5, lines 43-55).

Chuah also discloses that whenever there is a change in the RTP compression context, an appropriate context update code is used in the first byte of the compressed RTP header to indicate additional changed information carried within the RTP compressed header (see Column 5, lines 24-29).

Chuah further discloses that a compressed RTP header includes fields of (a) a context update code, (b) an M field for the RTP M bit, (c) a time clicks field, (d) a UDP checksum field, (e) an IP packet ID, (f) a CSRC list, and (g) an RTP header extension, where the context update code field (a) indicates what information is included in the RTP

compressed header (see Column 7, lines 12-20 and Figure 14). Chuah discloses that fields (a)-(g) are included in the compressed RTP header if fields (d)-(g) need to be included, but the compressed RTP header field usually only includes fields (a)-(c) (see Column 7, lines 25-30).

On pages 3 and 4 of the Office Action, the Examiner asserted that the RTP context set up message corresponds to the non-update packet of the present invention, and that the RTP context update code corresponds to the update packet of the present invention. Further, the Examiner asserted that fields (a)-(g) included in the RTP compressed header correspond to the packet stream parameter of the present invention, and that the context update code and the RTP header extension correspond to the extended update packet of the present invention.

According to the Examiner's labeling of the elements of Chuah, the context update code of Chuah amounts to both the update packet and the packet stream parameter of the present invention, and when combined with the RTP header extension, amounts to the extended update packet of the present invention. As described above, the context update code of Chuah indicates what information is included in the RTP compressed header.

However, as defined in lines 14-17 on page 6 of the original specification (line 31 on page 7 to line 1 on page 8 of the substitute specification), the packet stream parameter is defined as any channel, packet stream and compressor-state property which can at least indirectly provide some information that might be suitable for deciding when and how to send information about an irregular change to the decompressor.

The context update code of Chuah, however, clearly does not provide any information for deciding when and how to send information about an irregular change. Instead, as described above, Chuah discloses that whenever there is a change in the RTP compression context, the context update code is used in the first byte of the compressed RTP header to indicate additional changed information carried within the RTP compressed header (see Column 5, lines 24-29). Accordingly, the context update code of Chuah is not used for deciding how to send information about an irregular change to a decompressor (e.g., the IP end host 240). Instead, the context update code merely indicates what information is included in the RTP compressed header. Moreover, the

decision as to how to inform a decompressor about an irregular change is not facilitated by including the context update code, because the context update code merely indicates which fields are present in the RTP compressed header.

Furthermore, none of the remaining fields (b)-(g) which may be included in the RTP compressed header provide any information for deciding when and how to send information about an irregular change.

Therefore, Chuah clearly does not disclose or suggest that when an irregular change of the packet stream is detected, at least one packet stream parameter is determined, as recited in claims 1 and 11.

Moreover, Chuah also does not disclose or suggest transmitting, depending on the determined at least one packet parameter, either an extended update packet containing information about the irregular change or an extended non-update packet containing information about the irregular change, as recited in claims 1 and 11. As described above, Chuah merely discloses that whenever there is a change in the RTP compression context, the context update code is used in the first byte of the compressed RTP header to indicate additional changed information carried within the RTP compressed header. However, the "additional changed information" which is included in the RTP compressed header has been interpreted by the Examiner as corresponding to the packet stream parameter of the present invention. Accordingly, if the Examiner maintains his interpretation that the fields (a)-(g) which may be included in the RTP compressed header correspond to the packet stream parameter of the present invention, Chuah thus discloses transmitting a packet stream parameter depending on itself, i.e., a packet stream parameter depending on the packet stream parameter, which does not amount to transmitting either the extended update packet (containing information about the irregular change) or the extended non-update packet (containing information about the irregular change) depending on an obtained packet stream parameter.

In addition, even if the Examiner were to consider the context update field as corresponding to the extended update packet of the present invention, Chuah cannot be interpreted as also disclosing the extended non-update packet as recited in claims 1 and 11. That is, each RTP compressed header of Chuah includes the context update code, and therefore, if any of fields (b)-(g) are included in the RTP compressed header, Chuah

merely discloses transmitting one type of update packet since the context update code is included in each RTP compressed header to indicate which fields (b)-(g) are present in the RTP compressed header. Furthermore, as recited in claims 1 and 11, the extended non-update packet is not used to update the context. In contrast, as described above, the context update code is included in each RTP compressed header. Therefore, Chuah clearly does not disclose or suggest transmitting an extended non-update packet containing information about the irregular change since Chuah does not even contemplate the extended non-update code of the present invention.

Accordingly, Chuah clearly does not disclose or suggest transmitting, depending on the determined packet stream parameter, either an extended update packet containing information about the irregular change or an extended non-update packet containing information about the irregular change, where the extended non-update packet is not used to update the context, as recited in claim 1.

Similarly, Chuah clearly does not disclose or suggest a transmission unit as being operable to, depending on the determined at least one packet stream parameter, transmit either an extended update packet containing information about the irregular change or an extended non-update packet containing information about the irregular change, where the extended non-update packet is not used to update the context., as recited in claim 11.

Therefore, claims 1 and 11 are clearly not anticipated by Chuah since Chuah clearly fails to disclose each and every limitation of claims 1 and 11.

In item 6 on page 6 of the Office Action, claims 4 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chuah in view of Le et al. (U.S. 6,782,047). As demonstrated above, Chuah clearly fails to disclose or suggest each and every limitation of claims 1 and 11.

Le et al. also fails to disclose or suggest that if an irregular change of the packet stream is detected, at least one packet stream is determined, and, depending on the determined at least one packet stream parameter, either an extended update packet containing information about the irregular change or an extended non-update packet containing information about the irregular change is transmitted, where the extended non-update packet is not used to update the context.

Therefore, Le et al. clearly fails to cure the deficiencies of Chuah for failing to disclose or suggest each and every limitation of claims 1 and 11.

Accordingly, no obvious combination of claims 1 and 11 would result in the inventions of claims 1 and 11 since Chuah and Le et al., either individually or in combination, clearly fail to disclose or suggest each and every limitation of claims 1 and 11.

Therefore, claims 1 and 11 are clearly allowable over Chuah and Le et al.

Furthermore, it is submitted that the clear distinctions discussed above are such that a person having ordinary skill in the art at the time the invention was made would not have been motivated to modify Chuah and Le et al. in such as manner as to result in, or otherwise render obvious, the present invention as recited in claims 1 and 11. Therefore, it is submitted that the claims 1 and 11, as well as claims 2-10 and 12-20 which depend therefrom, are clearly allowable over the prior art as applied by the Examiner.

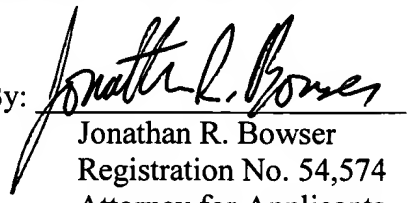
In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

A fee and a Petition for a two-month Extension of Time are filed herewith pursuant to 37 CFR § 1.136(a).

Respectfully submitted,

Carsten BURMEISTER et al.

By: 

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